

## ABSTRACT OF THE INVENTION

A general purpose simulator providing a high fidelity simulation performs the simulation at level 2, the data link layer of the protocol stack level where each individual client has a unique client address. The unique client address emulated by the simulator is inserted into a data frame at the data link layer of a protocol stack before the data frame is transmitted on the communications channel. Simulation at level 3 is also performed by inserting level 3 network identifier to emulated remote multiple clients. The simulator of the present invention may be run at a workstation residing connected to a server servicing the simulated client requests. The simulator also may be run on a host computer connected to a server via a communications device. Additionally, the simulator may also be run on the same system as the server.